“OK Google…
talk to Hidden Cities”
A Financial Times Action for the Google Assistant.

Co-produced by Rosina Sound and Reduced Listening
A ninety minute interactive audio adventure for the Google Assistant that transports you to the heart of the fast changing city of Berlin.

Use voice commands to choose your own path through nine exciting locations and local characters, with your host, The Financial Times Berlin Bureau Chief Guy Chazan.
Hidden Cities
Design and Build Process

- The Key Questions
- Design Constraints
- UX Manifesto
- UX Flow
- Prototyping
- State tracking

- Real Voices
- Error Handling
- Onboarding
- Editorial Process
- Technical Production
- Bespoke CMS
Hidden Cities UX Design
The Key Questions

**WHY?** Why would you interact rather than listen passively?

**HOW?** How do we set up the experience so it’s intuitive? How do you feel when you’re in this experience? How can we make interactions fun and interesting?

**WHAT?** What is Hidden Cities? What can we offer that is different and compelling?

**WHO?** Who is the audience? What are they interested in? How can we tailor the experience for multiple users? How do we bring them back for more?
Hidden Cities UX Design
Constraints

We started our UX design with our constraints

- Maximum 120 second clip length before an interaction
- The user could not absorb more than two, at the most three, options at any time
- No reverse navigation
Hidden Cities UX Design
The Rules

**Story** is king

**Questions** need to be concise, interesting, engaging and fun

**Interactions** need to have purpose and reward users as often as possible

**Sound design** is key to placing the user in Berlin, but also for setting up expectations of when to speak and when to listen

**Design for inattention** as it’s likely the Action will be used when the user is not fully paying attention, or may be interrupted

**Define the many voices and their roles** make sure the different voices of the host, narrative, and instructional is clear and easy to understand

**Set up expectations** for the experience: how long it is, and what the user needs to do
From this we ended up with our final overall design, which included:

**A simple circular flow**

The user could enter from any point in the map, but they would be taken in a circle around the nine locations.

The ability to jump between locations
The technical production was in three phases - an **Alpha/prototype** phase, **Beta** and **Final** phase.

We flowcharted the script for a single location and recorded placeholder audio files.

Then manually produced a dialogflow action for 1/9 of the full scale.

This showed us using DialogFlow was complex and needed to be adapted quickly and we realised we needed to build a bespoke CMS.

We used the Alpha for initial concept user testing and outlining our delivery processes.
If a user returned to the experience they were taken to the next unvisited location in the flow. This tracking could also tell if a user had been to locations out of order and skip over previous visited locations.

The Action also told them how much of the experience they had completed when they exited and when they returned.
Hidden Cities UX Design
Interactions

**Two types of interaction questions**

We had simple binary questions leading on from the clip, which would allow the user to choose their next piece of content.

But we also had “any response” interactions that allowed the user to speak freely, and be taken to the next clip available. This also simplified some of our location flows, making the experience easier to implement.
We hired Caroline, a Berliner and local radio presenter to be the Action’s instructional guide.

During user testing we found that a real, human voice was favoured, as it gave the experience personality and humour. Other types of voices took the user out of the immersive experience and made it feel more like a functional Action.
Simple error handling and help menu

We used best practice where the Action gives the user two attempts, with more direct prompts at each error, and then gracefully removes them from the experience.

The help menu could be accessed at any point, and had its own flow but also only offered three options at any time.
Getting into Hidden Cities Berlin was possible in two ways.

The user could say “Hey Google, take me to Hidden Cities Berlin”. This would start the Action from the first location.

The user could also say “Hey Google, talk to hidden cities, the lakes” (or any one of the nine locations). This would drop them into the experience somewhere along the circular flow, which would then move them through the experience clockwise.
Once in the Action it was important to allow the user to move around easily, but without too much instruction.

The user could, if they knew the locations, instruct the Action to “Take me to Tango”. However, it was important to design for those users without the physical map and those who did not recall all the locations available.

This was solved by creating functionality where the user could say “move on” at any time and be taken to the next, un-listened to location on the circular flow.
Each of the nine locations had their own flow. To create these we:

- Developed story outlines
- Ran UX sessions
- Scripted the entire experience
- User tested the location
- Updated the scripts and flows
Created a master list of ideas working collaboratively with the FT and Berlin producers

Located the contributors in each location who could tell the stories

Created a sample flow for each location setting the structure of the UX

Wrote a full draft script prior to recording with full sign off from the FT

Created a content complete beta version with some temporary audio for the interaction questions

User tested the beta versions and received sign off before doing a final record with Caroline in Berlin
For Beta we built:

- A simple CMS where all of the content could be managed by a producer
- DialogFlow files generated from CMS database
- DialogFlow files packaged and uploaded automatically
Stayed within the Google Ecosystem by using Firebase services for...

- Hosting
- Cloud Functions
- Cloud Storage
- Realtime Database
- Authentication

Language: Javascript

Cloud Functions

- WAV to MP3 Conversion
- Build Process
- Upload to Dialogflow
- Dialogflow Fulfilment
Simple data entry system

- Create areas
- Create locations within areas
- Join locations together
- Enter script copy
- Upload audio
- Build and upload to Dialogflow
- Test instantly

No user interaction with Dialogflow UI

Developed as a flexible system for future content
Hidden Cities Technical Production
CMS

Training Phrases
Issues with synonyms

Main Speech
Documentary speech
Prompt (Caroline)

Error Handling
2 strikes and you’re out

Destination Locations
Training phrase matching

Card Slot for images and text on visual devices
Hidden Cities Technical Production
CMS

125 locations
331 Individual audio files
650 Individual uploads
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